

ABSTRACT

Disclosed is an integrated circuit arrangement for safety-critical applications, such as for regulating and controlling tasks in an electronic brake system for motor vehicles. The arrangement includes several electronic, cooperating functional groups (25, 25'), with electric lines (30) provided to interconnect the functional groups (25, 25'). The functional groups consist of a first type and a second type, with the functional groups of the first type having at least the functional group redundant microprocessor system (1) or the functional group input/output devices (19). The functional groups of the second type have at least the functional groups actuator drivers (11, 15, 24, 35) and safety circuits (5, 5', 7, 7'). The functional groups of the first type and the second type are grouped on a joint chip or chip support member (23). The arrangement can be used in electronic brake systems for motor vehicles, in electronic control systems for governing the driving dynamics of motor vehicles, or for controlling electronically controlled parking brakes, or for controlling vehicle restraint systems.